

Erasable Programmable Read Only Memory) and a Flash memory. Further, it is expected that one of ordinary skill, notwithstanding possibly significant effort and many design choices motivated by, for example, available time, current technology, and economic considerations, when guided by the concepts and principles disclosed herein will be readily capable of generating such software instructions and programs and ICs with minimal experimentation.

[0034] The Abstract of the Disclosure is provided to allow the reader to quickly ascertain the nature of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims. In addition, in the foregoing Detailed Description, it can be seen that various features are grouped together in various embodiments for the purpose of streamlining the disclosure. This method of disclosure is not to be interpreted as reflecting an intention that the claimed embodiments require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive subject matter lies in less than all features of a single disclosed embodiment. Thus the following claims are hereby incorporated into the Detailed Description, with each claim standing on its own as a separately claimed subject matter.

What is claimed is:

1. An apparatus for detecting a touch on a device, the apparatus comprising:

- a first antenna;
- a second antenna;
- a first voltage controlled oscillator (VCO) coupled to the first antenna;
- a second VCO coupled to the second antenna;
- a phase locked loop (PLL) coupled to the first and the second VCOs and outputting a first and a second steering voltage for the first and the second VCO; and
- logic circuitry detecting the touch by comparing a difference between the first and the second steering voltages.

2. The apparatus of claim **1** wherein the first and the second antenna lie substantially parallel to each other.

3. The apparatus of claim **2** wherein the first and the second antenna lie in substantially opposite directions to each other.

4. The apparatus of claim **3** further comprising:

- a third oscillator coupled to the PLL and serving as a frequency source for the PLL, and where the first

steering voltage is generated based on a phase difference between the first VCO and the third oscillator; and wherein the second steering voltage is generated based on a phase difference between the second VCO and the third oscillator.

5. The apparatus of claim **4** further comprising:

- a database populated with differences in steering voltage as they apply to a location of the touch.

6. The apparatus of claim **5** further comprising a user control interface existing above the first and the second antenna.

7. The apparatus of claim **1** further comprising:

- a third oscillator coupled to the PLL and serving as a frequency source for the PLL, and where the first steering voltage is generated based on a phase difference between the first VCO and the third oscillator; and wherein the second steering voltage is generated based on a phase difference between the second VCO and the third oscillator.

8. The apparatus of claim **1** further comprising:

- a database populated with differences in steering voltage as they apply to a location of the touch.

9. The apparatus of claim **1** wherein the first and the second VCO share a same VCO circuitry.

10. A method for detecting a touch on a device, the method comprising the steps of:

- receiving a first steering voltage for a first VCO, the first steering voltage output from a PLL;
- receiving a second steering voltage for a second VCO, the second steering voltage output from the PLL;
- determining a difference in steering voltage between the first and the second steering voltages; and
- detecting the touch on the device based on a difference in the steering voltage between the first and the second steering voltages.

11. The method of claim **10** wherein the steering voltage for the first VCO is based on a contact with a first antenna, and the steering voltage for the second VCO is based on a contact with a second antenna.

12. The method of claim **10** wherein the first and the second antenna is taken from the group consisting of a monopole antenna, a dipole antenna, a loop antenna, a PIFA, a coil antenna, and an inductor component.

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